

ABSTRACT OF THE DISCLOSURE

A thickness extensional vibration mode piezoelectric resonator includes a piezoelectric body having piezoelectric layers and N internal electrodes disposed therein, where N is an integer equal to 3 to 5. Electric fields of opposite polarity are applied alternately in the direction of thickness to the piezoelectric layers located between the internal electrodes. When the thickness of a piezoelectric layer between adjacent internal electrodes in the direction of thickness is denoted by D and the thicknesses of a first and second piezoelectric layer outside the outermost internal electrodes in the direction of thickness are denoted by D_1 and D_2 , the following relationships are satisfied: $0.50 \leq (D_1 + D_2)/2D \leq 1.00$ at $N = 3$, $0.50 \leq (D_1 + D_2)/2D \leq 0.90$ at $N = 4$, and $0.50 \leq (D_1 + D_2)/2D \leq 0.80$ at $N = 5$.

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